

A RE-EVALUATION OF THE GENUS
CREMASTOPUS (CUCURBITACEAE)

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ABSTRACT

Cremastopus, a small cucurbit genus, differs from *Cyclanthera* by only one character, single-seeded fruits. The presence of numerous shared characters between the two taxa indicates that the species of *Cremastopus* should be transferred to *Cyclanthera*.

RESUMEN

Cremastopus, un genero pequeño de Cucurbitaceae, se distingue de *Cyclanthera* por solo un caracter, frutos de una sola semilla. La presencia de características numerosas en común entre los dos grupos indica que las especies de *Cremastopus* deben de transferirse a *Cyclanthera*.

Cremastopus P. Wils., established in 1962, is said to differ from the closely related *Cyclanthera* Schrader by the possession of single-seeded fruits. The two taxa share many distinctive characters, however, and the maintenance of the former entity as a distinct genus is not justified. The only difference between *Cremastopus* and *Cyclanthera* is that the former usually is single-seeded. Both have the same unique stamen morphology, the same type of oblique fruits with elongate placentae, and a very similar overall aspect.

Cyclanthera and *Cremastopus* are the only taxa in the tribe Cyclanthereae with the anther thecae in a single, unfolded ring. Single anther thecae are found in other Cyclanthereae (*Pseudocyclanthera* Mart. Crov. and *Rytidostylis* Hook. & Arn.), but in these genera the thecae are variously folded. The androecium in the African *Cyclantheropsis* Harms (tribe Zanonieae) has a superficial resemblance to that of *Cyclanthera*, but instead of being a single unbroken ring, it is composed of two thecae joined end to end (Jeffrey 1967). The similar appearance of the anthers of the two distantly related genera is obviously a case of convergent evolution.

The name *Cremastopus* apparently is in reference to the structure that Wilson calls an elongate funiculus. This is equivalent to the

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placental arm found in *Cyclanthera* and the related genera *Elateriopsis* Ernst, *Hanburia* Seemann, *Pseudocyclanthera*, and *Rytidostylis* (Kearns in preparation). These genera have explosively dehiscent fruits in which the placental arm functions as a catapult, thereby dispersing the seeds. The fruits of *Cremastopus rostrata* Paul G. Wilson and *C. minimus* (S. Watson) Paul G. Wilson are also explosively dehiscent.

The slight difference in ovule number between *Cyclanthera* and *Cremastopus* breaks down upon close examination. In some species of *Cyclanthera*, the fruits are few to single-seeded, while the fruits of *Cremastopus rostrata* have either one or two seeds (Jones 1969).

Because the two genera share many unique characters and have no major character differences, the two named species of *Cremastopus* are hereby placed in synonymy under *Cyclanthera*.

Cyclanthera minima (S. Watson) Kearns & C. Jones, comb. nov.—*Sicyos minimus* S. Watson, Proc. Amer. Acad. 23:274. 1888. *Brandegea minima* (S. Watson) Rose, Contr. U.S. Natl. Herb. 5:121. 1897. *Cremastopus minimus* (S. Watson) Paul G. Wilson, Hooker's Icon. Pl. 36:t.3586. 1962. *Heterosicyos minimus* (S. Watson) Cockerell, Bot. Gaz. (Crawfordsville) 24:378. 1897. nom. illegit., non Welw. ex Hook. f.—TYPE: MEXICO, Chihuahua, canyons of the Sierra Madre, under cliffs, 2 Oct 1888, *Pringle 1871* (holotype, US; isotypes, K!, MICH!, MO!).

Additional specimens examined: MEXICO: Chihuahua: Casada de Basaseachic, 1960 m, *Torres and Tenorio 3792* (MO); Chuhui-chupa, *LeSueur 949* (MO); near Colonia Garcia, 7300 ft, *Townsend and Barber 190* (MO); Loreto, Rio Rayo, *Gentry 2556* (MO). Durango: Barranca of Rio Jaral, bluffs 15 mi NW of Coyotes, 2100 m, *McVaugh 21722* (MICH). Sinaloa: 6 km W of El Palmito, 2200 m, *Dieterle 3837* (MICH); Ocurahui, Sierra Surutato, *Gentry 6265* (MICH, MO); Sierra Surutato, 2 mi S of El Triquito, 5800 ft, *Breedlove and Kawahara 17014* (MICH); Sierra Surutato, 3 mi SE of Los Ornos, 7200 ft, *Breedlove and Thorne 18454* (MICH).

Cyclanthera rostrata (Paul G. Wilson) Kearns & C. Jones, comb. nov.—*Cremastopus rostratus* Paul G. Wilson, Hooker's Icon. Pl. 36:t.3586. 1962.—TYPE: MEXICO, Mexico, Dist. Temascaltepec, Cumbre de Tejupilco, 10 October 1932, *Hinton 2045* (holotype, K!; isotype, GH!).

Additional specimens examined: MEXICO: Mexico: Temascaltepec, near Tejupilco, *Hinton 8458* (GH, MICH, NY, UC); Temascaltepec, Vigas, *Hinton 4805* (GH), *8616* (F, GH, MO, NY). Michoacán: Vicinity of Motel de la Sierra, ca. 6 km N of Uruapan, *Dieterle 4413* (MICH); Uruapan, *Hinton 15528* (MICH, NY, UC, US); 2 mi S of Tancitaro, *Leavenworth 565* (F, NY).

Jeffrey (1978, 1990) indicated that there is a third, as yet unnamed, species of *Cremastopus*. Having not yet seen the specimen on which Jeffrey based his decision (*Breedlove 15135*), we are unable to evaluate his conclusion. The proper disposition of the Breedlove specimens will be addressed in a forthcoming treatment of *Cyclanthera* (Jones and Kearns in preparation).

LITERATURE CITED

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- . 1990. Appendix: an outline classification of the Cucurbitaceae. Pp. 449–463 in D. M. Bates, R. W. Robinson, and C. Jeffrey (eds.), Biology and utilization of the Cucurbitaceae. Cornell University Press, Ithaca.
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ANNOUNCEMENT

THE RUPERT BARNEBY AWARD

The New York Botanical Garden invites applications for the 1992 Rupert Barneby Award. The award of \$500.00 is to assist researchers planning to come to The New York Botanical Garden to study the rich collection of Leguminosae. Anyone interested in applying for the award should submit their curriculum vitae, a letter describing the project for which the award is sought and how the collections at NYBG will benefit their research. Travel to NYBG should be planned between Jan. 1, 1993 and Jan. 30, 1994. The letter should be addressed to Dr. Brian M. Boom, Vice President for Botanical Science, The New York Botanical Garden, Bronx, NY 10458, USA, and received no later than December 4, 1992. Announcement of the recipient will be made by December 20. Anyone interested in making a contribution to The Rupert Barneby Fund in Legume Systematics, which support this award, may send their check, payable to The New York Botanical Garden, to Dr. Boom.

The recipient of the 1991 Rupert Barneby Award is Edith Gómez-Sosa, a legume taxonomist from the Instituto de Botánica Darwinion in Argentina. Professor Gómez-Sosa will use the award to further her studies of the genus *Astragalus* through the consultation of collections at The New York Botanical Garden during July and August of 1992. She will also have the opportunity to work together with Dr. Barneby during her stay in New York.